

ABSTRACT OF THE DISCLOSURE

A semiconductor optical amplifier (SOA) module relies on Amplified Spontaneous Emission (ASE) from the first stage of an SOA in feedback-based regulation of the amplification factor. The ASE is deflected by an isolator in the input unit at a prescribed angle from a traveling path of the input optical signal and toward a photo-detector that
5 detects the power of the ASE light. Regulation is performed by a controller that receives the detected power level from the photo-detector and also receives from another photo-detector a power level of the optical signal after amplification in the SOA.